

APPLICATION OF  
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FOR LETTERS PATENT IN THE UNITED STATES  
FOR IMPROVEMENTS IN  
COLLAPSIBLE PIZZA BOX

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## COLLAPSIBLE PIZZA BOX

### BACKGROUND OF THE INVENTION

The invention is generally directed to a collapsible pizza box and, in particular to a collapsible pizza box which allows the consumer to collapse the pizza box after the pizza has been consumed and prior to disposal. Currently, while pizza companies have done an excellent job packaging, boxing, insulating and delivering fresh and hot pizzas to consumers, they have failed to deal with the problem that the consumer has after the pizza has been consumed. That is, disposing of the large, relatively flat boxes used to contain the pizzas. These boxes are a nuisance to dispose of because currently they are not collapsible or breakable for easy disposal. In fact, the boxes are made particularly rigid so as to protect the pizza from being squashed or the cheese sticking to the roof of the box during delivery or, in the case of the consumer, picking up the pizza and returning the pizza to the user's home.

Generally, pizza boxes are either stacked on or around the trash receptacle after use or placed within trash bags that are often torn and damaged as a result of the pizza boxes' sharp

corners and/or size. In all cases, it is a problem for disposal and environmental pollution. Generally, the volume taken up by a pizza box in its standard form is much greater than the volume of the materials out of which the box is formed. Accordingly, there is a need for an improved pizza box which includes all of the benefits of the current pizza boxes in connection with protection of the pizza during delivery, insulation and the like, while allowing the consumer to easily fold, collapse and/or break apart the pizza box into a much smaller size when finished for easy disposal.

#### SUMMARY OF THE INVENTION

The invention is directed to a pizza box incorporating standard perforations, creases and piercing of the cardboard to form a traditional pizza box to be assembled in accordance with usual procedures and adding additional perforations, creases and piercing in key areas which allow the box to be collapsed down either by breaking corners off and folding the box in half or thirds, breaking the sides down and folding the box, breaking the

corners off and breaking the box into smaller pieces, or breaking the box into smaller pieces.

Accordingly, it is an object of the invention to provide an improved pizza box which is collapsible into a smaller volume than the assembled pizza box for easy disposal.

Another object of the invention is to provide an improved pizza box which can be collapsed or broken down into smaller pieces without affecting the structural rigidity and strength of the pizza box during its use as a carrier for pizza.

Yet another object of the invention is to provide an improved collapsible pizza box that allows easy disposal of pizza boxes following use in traditional trash receptacles or bags without damaging the receptacles or bags or occupying unnecessarily large volumes of space.

Yet still a further object of the invention is to provide an improved collapsible pizza box which is environmentally friendly in reducing the volume of space occupied by the box after it is collapsed.

Still other objects and advantages of the invention will, in part, be obvious and will, in part, be apparent from the specification.

The invention accordingly comprises the features of construction, combination of elements, arrangement of parts, combinations of steps and procedures, all of which will be exemplified in the constructions and processes hereinafter set forth and the scope of the invention will be indicated in the claims.

#### BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the invention, reference is had to the following descriptions taken in connection with the accompanying drawings, in which:

Fig. 1A is a perspective view of a pizza box design constructed in accordance with a first preferred embodiment of the invention;

Fig. 1B is a top plan view of a flat blank for the pizza box design of Fig 1A;

Fig. 1C is a side elevational view of the pizza box of Fig. 1A folded in accordance with a first preferred embodiment of the invention;

Fig. 1D is a side elevational view of the pizza box of Fig. 1A folded in accordance with a second preferred embodiment of the invention;

Fig. 2A is a perspective view of a pizza box design constructed in accordance with a second preferred embodiment of the invention;

Fig. 2B is a top plan view of a flat blank for the pizza box of Fig. 2A;

Fig. 3A is a perspective view of a pizza box design constructed in accordance with a third preferred embodiment of the invention;

Fig. 3B is a top plan view of a flat blank design which can be formed into the pizza box design of Fig. 3A;

Fig. 4A is a perspective view of a pizza box design constructed in accordance with a fourth preferred embodiment of the invention;

Fig. 4B is a top plan view of a flat blank designed to be formed into the pizza box of Fig 4A;

Fig. 5A is a perspective view of a pizza box design constructed in accordance with a fifth preferred embodiment of the invention;

Fig. 5B is a top plan view of a flat blank for a pizza box which can be assembled into the pizza box of Fig 5A;

Fig. 6A is a perspective view of a pizza box design constructed in accordance with a sixth preferred embodiment of the invention;

Fig. 6B is a top plan view of a flat blank of a pizza box which can be assembled into the pizza box of Fig 6A;

Fig. 7A is a perspective view of a pizza box design constructed in accordance with a seventh preferred embodiment of the invention;

Fig. 7B is a top plan view of a flat blank of a pizza box which can be assembled into the pizza box of Fig 7A;

Fig. 8A is a perspective view of a pizza box design constructed in accordance with an eighth preferred embodiment of the invention; and

Fig. 8B is a top plan view of a flat blank for a pizza box design which can be assembled into the pizza box of Fig 8A;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Pizza box design is fairly highly developed and has many different configurations of boxes which are formed in different sizes and even different shapes to conform with the needs of the pizza producers. However, for purposes of description the embodiments shown herein are of square boxes intended to hold traditional round or square pizza pies. Other shapes are, of course, possible. These would include shapes which have a small, narrowed section on one end so has to hold rounded pies from sliding around in a square box and rectangular or even octagonal boxes. Generally, pizza boxes are formed from flat die-cut pieces of corrugated cardboard or blanks, which are then separated or folded in accordance with the box design into a thin rectangular solid with a square upper and lower surface. Generally, the flat

is cut and creased in the die-cutting process with the creases marked by scoring the cardboard and cuts made by a slitter. These are conventional elements in pizza box design. In practice, perforations made by the slitter, creases made by the scoring and piercing of the cardboard in key areas can be accomplished without weakening or changing the design or use of the pizza box. In effect, the design changes are implemented by making a few changes to the existing steel rule dies and other molds made to create boxes.

Reference is made to Figs. 1A and 1B wherein a perspective view of a first preferred embodiment of the invention of a pizza box, generally indicated as 100, is shown. Like reference elements will refer to like elements in connection with each of the different embodiments. Generally, the pizza box has top and bottom surfaces 110 and three side surfaces 111 and back surface 112. For purposes of reference, one of the side surfaces is the one to which the top surface 110 is connected so that it can open and close and this is identified as back surface 112. In addition, a tab 115 fits into a slit (not shown) so that the box

can be sealed when assembled. The sides 111 and 112 are established in the flat design of Fig. 1B by creases 115, 119, 113 and 114. These are all conventional elements of the pizza box design. However, in addition to these well-known elements of the pizza box, the invention includes upper and lower slits or scores 117 and 118. In preferred embodiments of the invention, slits or scores 117 and 118 can be set up to either allow folding or separation, but creasing along these lines is a current preferred embodiment. It is noted that lines 117 and 118 are set up so as to be offset from each other for folding. The result, as shown in Figs. 1C and 1D, the pizza box can be folded up in half, as shown in Fig. 1C, on top and then on bottom, or folded over and over as shown in Fig. 1D. In all of the designs shown herein, there is no significant reduction in the strength and durability of the pizza box during its use to transport pizza and protect it from the elements, crushing or from contacting the inner surfaces of the pizza box, each of which can degrade the quality of the pizza. However, once the pizza is completed and the user needs to dispose of the pizza box, the traditional difficulties associated with

pizza boxes, as they are very stiff, useful for transporting the pizza, but not useful for disposing of the pizza box is a negative factor. However, with the additional lines 117 and 118, which allow the user to fold or separate the pizza box along lines 117 and 118, the pizza box can be reduced to a manageable size without tremendous volume with sharp corners which tend to make putting the pizza box into a garbage can or garbage bag difficult if not impossible.

Reference is next made to Figs. 2A and 2B in which a pizza box generally indicated as 120 constructed in accordance with a second preferred embodiment of the invention is depicted. Similar elements are represented by similar referenced numerals. The only differences between the pizza box of Figs. 2A and 2B and the pizza box 100 are the additional lines 127 shown in Figs. 2A and 2B. These lines 127, of which there are four diagonal lines at the corners of each of the top, bottom and side surfaces of the pizza box 120, are preferably slit so they can be removed once the pizza box is finished being used. In this way, the four corners

of the pizza box, as shown in Fig. 2A, can be removed and the box then reduced to two flat pieces and the four corners.

Reference is next made to Figs. 3A and 3B in which a pizza box, generally indicated as 140 constructed in accordance with a third preferred embodiment is depicted, like reference elements being represented by like reference numerals. Again, the only differences from the prior embodiments are the additional lines 147 and 148, here represented as perpendicular lines. Here the lines can be either creases or slits which would allow the box to be separated into smaller pieces or folded in several ways so as to make a more efficient, smaller package for disposal.

Reference is next made to Figs. 4A and 4B wherein a pizza box design, generally indicated as 160 constructed in accordance with a fourth preferred embodiment is depicted, like reference numerals representing like elements.

Again, the only difference from the prior embodiments is the location and orientation of line 167, which runs straight across the middle of the pizza box on the top, bottom and along the sides as well. Again, this may either be a crease or a slit,

both of which would provide substantial reduction in the disposal volume of the box 160. While the single line 167 is shown in a vertical orientation, it may similarly be placed 90° to this orientation of Fig. 4A in a horizontal fashion with similar effect.

Reference is next made to Figs. 5A and 5B wherein a pizza box design, generally indicated as 180 constructed in accordance with a fifth preferred embodiment is depicted, like reference numerals representing like reference elements. Again, the only differences between the pizza box 180 and the prior embodiments is the additional slit 187 shown here as a single diagonal element going from corner to corner on the top and bottom surface of the box. This may be, again, formed as either a slit or a crease, allowing either separation or folding of the box along lines 187.

Reference is next made to Figs. 6A and 6B wherein a pizza box design, generally indicated as 200 constructed in accordance with a sixth preferred embodiment is depicted, like reference numerals representing like reference elements. Again,

pizza box 200 is different from the earlier embodiments only by virtue of the two partial diagonal lines 207 and 208, which allow for either folding or separation of the box into smaller pieces. If the lines are embodied as slits, the pizza box can be separated into three sections and more easily disposed of in that fashion. If they are fold lines, the box can be folded into three parts to, again, provide a much smaller profile for disposal.

Reference is next made to Figs. 7A and 7B wherein a pizza box design, generally indicated as 220 constructed in accordance with a seventh preferred embodiment is depicted, like elements being represented by like reference numerals. Again, the design of pizza box 220 varies from the earlier embodiments only by the diagonal crossing lines 227 and 228, which can either be formed all folds, all slits or a combination of the two. Again, this allows for the pizza box to be reduced in size for disposal.

Reference is next made to Figs. 8A and 8B wherein a pizza box design, generally indicated as 240 constructed in accordance with a eighth preferred embodiment is depicted, like elements being represented by like referenced numerals. Again,

the only difference between the prior embodiments and the box design 240 are lines 247 and 248 which, again, can either be creases to allow folding or slits to allow separation of the box into pieces. Both of these arrangements or a combination of them can provide for a substantially reduced volume and size of the pizza box after it has served its useful function and needs to be disposed of.

Pizza and pie containers and, specifically, "pizza boxes" as we know them today are all manufactured basically the same. Boxes/containers are basically made of paper or plastic, corrugated cardboard, corrugated plastic, chipboard, plastic materials, paper materials and/or recycled materials. Pizza boxes are manufactured generally using corrugated cardboard that has been stamped into a specific design and sized that allows the flat board to then be placed on a die with steel rules that then allow the flat board to be scored and slit scored. The score allows an indentation to be placed on the board which will allow the board to fold easily; and the slit-score allows a cut or partial cut to be placed into the board, basically, like a perforation, which

will allow the board to fold easily or tear easily in certain places. In both cases, the slit and the score are the two basic elements that allows for a flat piece of board, whether paper or plastic, to be run through a machine, using a die, that will allow you to "cookie cut" the board into a custom designed board that can be folded into a three-dimensional box that is what we know as a pizza box, pie box or other container.

The design changes shown herein to the box design make it better by the addition of additional lines where there is scoring, score-slitting and/or a combination of the two in key areas that will allow the box, after it has been assembled and used, to be broken down, collapsed, and/or broken into pieces for easy disposal. No matter what type of box or container, no matter what type of manufacturing materials, and no matter what application or process of manufacturing applied to the design, the added design elements for specifically collapsing, breaking down and/or breaking into pieces for after-use disposal provide a substantial benefit over prior designs. The eight specific preferred embodiments shown are only a limited number of those

available in which scoring, score-slitting and/or a combination of both allow after-use disposal without requiring the maintenance of the box in its assembled state or completely disassembling and then folding the box. An important element of this is that the use of the box and its structural rigidity during use is not affected by the additional lines, whether creases or slits.

Additional combinations of the perforations, creases and piercing of the cardboard in key areas can be made to improve the collapsibility and disposability of the pizza box without interfering with its use. Piercing allows a section to be separated or folded more easily.

Accordingly, an improved collapsible pizza box is provided which does not in any way diminish the functionality of the box for its intended purposes, either in assembly by the pizzeria or in protecting the pizza, while allowing the box to be disposed of more easily by the consumer after the pizza is removed from the box, without the need for special tools or significant effort.

It will thus be seen that the objects set forth above, among those made apparent in the proceeding description, are efficiently obtained and, since certain changes may be made in the above constructions and processes without departing from the spirit and scope of the invention, it is intended that all matter contained in the above description or shown in the accompanied drawings shall be interpreted as illustrative, and not in the limiting sense.

It will also be understood that the following Claims are intended to cover all of the generic and specific features of the invention, herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.